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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Christopher van Es

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Hanify & King, P.C.

1875 K Street

Suite 707

WASHINGTON, DC 20006

EXAMINER

YUAN, KATHLEEN S

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/673,322	Applicant(s) ES, CHRISTOPHER VAN	
	Examiner KATHLEEN S. YUAN	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The response received on 3/10/2009 has been placed in the file and was considered by the examiner. An action on the merit follows.

Response to Amendment

1. The amendments filed on 10 March 2009 have been fully considered. Response to these amendments is provided below.

Summary of Amendment/ Arguments and Examiner's Response:

2. The applicant has amended the claims to further define the predetermined time period.
3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

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- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A “Sequence Listing” is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required “Sequence Listing” is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory “process” under 35 U.S.C. 101 must (1) be tied to an apparatus or a machine or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps,

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

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and therefore do not qualify as a statutory process. Furthermore, the tie must be meaningful. A machine tied only to an intended use statement or to insignificant pre or post solution activity is not a meaningful tie. The tie must be in relation to a step or steps that are significant to the invention, or basic inventive concept. For example claim 1 recites a method that does not tie any of the steps of which the inventor considers their invention to a particular machine. The applicant only ties the method to a sensor, which is known in the art and is not a novel concept.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6393139 (Lin et al) in view of U.S. Patent No. 4210899 (Swonger) and in view of U.S. Patent Application Publication No. 20030026462 (Chung et al).

7. Regarding claim 7, Lin et al discloses an apparatus for authenticating a user (a security system (title), the apparatus comprising a fingerprint sensor, that which enters the fingerprint in step 640 of fig. 5, operable of sensing only one fingerprint at a time,

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since only one fingerprint is entered at a time in a sequence (col. 2, lines 20-23), and a processor, that which carries the process of fig. 5, and a database, the application access tables that are stored in an enrollment process (fig. 2) adapted to perform a method of a. placing, in sequence, each of a plurality of parts of the user's body on a biometric sensor, as explained above, at a sensing position, any position which allows for the entering of the fingerprint (col. 6, lines 18-20); b. obtaining from the sensor a data set of biometric contact characteristics for each of the plurality of body parts, the data set being the fingerprint parameters (col. 6, lines col. 6, lines 21-25); c. comparing each data set with authentic versions stored in a database, the authentic versions being the parameter of the fingerprint in the corresponding position of the fingerprint entering sequences stored in the table (col. 6, lines 21-27); and, d. issuing an authentication signal if the data sets satisfactorily match the corresponding authentic versions by signaling the allowance access to the application (col. 6, lines 30-34).

Although Lin et al discloses that a CCD sensor can be used as the biometric sensor (col. 1, lines 30-50), Lin et al does not disclose expressly that the biometric sensor is a contact sensor. Furthermore, Lin et al does not disclose expressly that there is a determining whether each of the sequence of inputs (in the case of Lin, the plurality of parts) are placed on the sensor at a sensing position within a predetermined period of time and authenticating if the inputs are placed within the predetermined period of time.

Swonger discloses that the sensor is a contact sensor since the finger is in contact with the sensor (fig. 3, item 111a). Thus, the parts of the user's body of Lin are

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placed on the biometric contact sensor at a sensing position during the input of the body parts when combined with Swonger.

Lin et al and Swonger are combinable because they are from the same field of endeavor, i.e. fingerprint image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have the finger in contact with the sensor.

The suggestion/motivation for doing so would have been to provide the best representation of the fingerprint and thus a more accurate match/recognition by providing a simple way to obtain a focused image.

Lin et al (as modified by Swonger) does not disclose expressly that it is determined whether each of inputs are within a predetermined period of time of one another, and that the authentication is issued if the inputs are within the predetermined period of time of one another.

Chung et al discloses an authentication system in which if the second input is not input within a predetermined period of time of the first input, the process times out and restarts the process (page 12, paragraph 112). Therefore, it is determined if the inputs are within the predetermined time period of paragraph 112, and the authentication can only be issued if the inputs are within the predetermined period of time of one another because if they were not within the predetermined time period, the method restarts.

Lin et al (as modified by Swonger) and Chung et al are combinable because they are from the same field of endeavor, i.e. authentication.

At the time of the invention, it would have been obvious to carry out a time out operation between inputs.

The suggestion/motivation for doing so would have been to provide a more convenient, secure method by restarting the system in the case a user leaves the authentication station and allowing a new user to input their data.

Therefore, it would have been obvious to combine the apparatus of Lin et al with the contact sensor as disclosed by Swonger and the time out operation of Chung et al to obtain the invention as specified in claim 7.

8. Claim 1 is rejected for the same reasons as claim 7. Thus, the arguments analogous to that presented above for claim 7 are equally applicable to claim 1. Claim 1 distinguishes from claim 7 only in that claim 1 is a methods claim and claim 7 is an apparatus. An apparatus carries out a method, therefore, prior art applies.

9. Regarding claim 2, Lin et al discloses that the body parts are the user's fingertips (Lin et al, fig. 1) and the biometric sensor is a fingerprint sensor since the sensor is sensing fingerprints.

10. Regarding claim 4, Lin et al discloses the step of confirming that the sequence of data sets was obtained in a predetermined order before issuing the authentication signal (col. 6, lines 18-21 and col. 5, lines 18-22).

11. Regarding claim 5, Lin et al discloses data sets are compared with the authentic versions using a minutiae based algorithm (col. 6, line 23).

12. Regarding claim 6, Lin et al discloses the data sets are compared with the authentic versions using a correlation based algorithm, since the data set/parameter of

the fingerprint is correlated to the parameter from the table to see if the fingerprint matches sufficiently to be in the corresponding position (col. 6, lines 23-30).

13. Regarding claim 8, Lin et al discloses that many fingerprint sensors are capacitive sensors (col. 1, lines 35-43).

14. Regarding claim 9, Lin et al discloses that many fingerprint sensors are optical sensors (col. 1, line 19). Swonger also uses an optical sensor (col. 13, lines 20-24).

15. Regarding claim 11, Lin et al further discloses a data input device, the device in which the user enters his or her User ID (col. 6, lines 9-10). Chung et al further discloses a data input device: that which reads a smart card, such as a voting machine (page 7, paragraph 70)

16. Regarding claim 13, Chung et al discloses that the data input device is a smart card reader (page 7, paragraph 70.)

17. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al in view of Chung et al.

Regarding claim 14, Lin et al discloses a method of authenticating the identity of a user (fig. 5), the method comprising: a. obtaining a sequence of data sets of biometric characteristics, or fingerprints, of the user, the sequence being the sequence of fingerprints and each data set being each fingerprint (col. 6, lines 18-21), each data set relating to one of a plurality of parts of the user's body, a different finger of the user's body (fig. 1 and 2); b. comparing each data set with authentic versions stored in a database, the authentic versions of the database being the parameters stored in a

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record in the application access table (col. 6, lines 14-15,23-27); c. monitoring the order in which the sequence of data sets was obtained (col. 5, lines 18-22), since the order must match the order stored; and, d. issuing an authentication signal if the data sets satisfactorily match the corresponding authentic versions and the sequence of data sets was obtained in a predetermined order, the authentication signal being the signal of allowing access to the user (col. 6, lines 30-34). The inputs of Lin et al are the sequence of data sets.

Lin et al does not disclose expressly determining whether the inputs are obtained within a predetermined period of time of one another and authenticating if the inputs are obtained within the predetermined period of time of one another.

Chung et al discloses an authentication system in which if the second input is not input within a predetermined period of time of the first input, the process times out and restarts the process (page 12, paragraph 112). Therefore, it is determined if the inputs are within the predetermined time period of paragraph 112, and the authentication can only be issued if the inputs are within the predetermined period of time of one another because if they were not within the predetermined time period, the method restarts.

Lin et al and Chung et al are combinable because they are from the same field of endeavor, i.e. authentication.

At the time of the invention, it would have been obvious to carry out a time out operation between inputs.

The suggestion/motivation for doing so would have been to provide a more convenient, secure method by restarting the system in the case a user leaves the authentication station and allowing a new user to input their data.

Therefore, it would have been obvious to combine the sequence of data sets for authentication of Lin et al with the predetermined time period time out of Chung et al to obtain the invention as specified in claim 14.

18. Regarding claim 15, Lin et al discloses at least one of the plurality of parts of the user's body is a fingertip (fig. 1).

19. Regarding claim 16, Lin et al discloses that one of the parts of the body can be the iris, a part of the eye (col. 5, line 31). Chung et al discloses that one of the parts of the body. Eye is the retina (page 3, paragraph 33.)

20. Regarding claim 17, Lin et al discloses at least one of the plurality of parts of the user's body is the user's face (col. 5, lines 28-31).

21. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al in view of Swonger and Chung et al, as applied to claim 7 above, and further in view of U.S. Patent No. 5864296 (Upton).

Lin et al (as modified by Swonger and Chung et al) discloses all of the claimed elements as set forth above and incorporated herein by reference.

Lin et al (as modified by Swonger and Chung et al) does not disclose expressly the fingerprint sensor is a thermal sensor.

Upton discloses that many fingerprint sensors are thermal (col. 1, lines 35-36).

Lin et al (as modified by Swonger and Chung et al) and Upton are combinable because they are from the same field of endeavor, i.e. fingerprint recognition.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a thermal sensor.

The suggestion/motivation for doing so would have been to provide a more flexible system by providing a different ways of sensing the fingerprint, such as imaging fingerprints in the dark.

Therefore, it would have been obvious to combine the apparatus of Lin et al (as modified by Swonger and Chung et al) with the thermal sensor of Upton to obtain the invention as specified in claim 10.

22. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al in view of Swonger and Chung et al, as applied to claim 11 above, and further in view of U.S. Patent No. 5594806 (Colbert).

Regarding claim 12, Lin et al (as modified by Swonger and Chung et al) discloses all of the claimed elements as set forth above and incorporated herein by reference.

Lin et al (as modified by Swonger and Chung et al) does not disclose expressly the data input device is a keypad.

Colbert discloses a data input device is a keypad (col. 6, line 58).

Lin et al (as modified by Swonger and Chung et al) and Colbert are combinable because they are from the same field of endeavor, i.e. verification systems.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide an input keypad.

The suggestion/motivation for doing so would have been to provide a more accurate/user-friendly system by allowing the user to access data and indicated information by providing a simple means to indicate the user's preferences.

Therefore, it would have been obvious to combine the apparatus of Lin et al (as modified by Swonger and Chung et al) with the keypad of Colbert to obtain the invention as specified in claim 12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHLEEN S. YUAN whose telephone number is (571)272-2902. The examiner can normally be reached on Monday to Thursdays, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571)272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KY

3/30/2009

/Brian P. Werner/

Supervisory Patent Examiner, Art Unit 2624